



January 31, 2023

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Re: United States of America, et.al. v. BP Products North America Inc. and BP-Husky Refining LLC
Northern District of Ohio, Western Division
Civil Action No. 3:20CV190
2022 Annual LDAR Compliance Status Report

NO EPA ACTION REQUIRED: Information is being submitted for information purposes only.

In accordance with Part IX and Appendix A, Part N, ¶ 34-36 of the referenced Consent Decree, attached is the LDAR compliance status report.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

To the best of my knowledge, after due inquiry, there remains in inventory at the Toledo Refinery no replacement valves or valve packing for Covered Equipment, other than (i) those that meet the definition of 'Certified Low-Leaking Valve' and/or 'Certified Low- Leaking Valve Packing Technology,' or (ii) valves for which a Commercial Unavailability determination is applicable, pursuant to Paragraph 20 hereof.

Regards,

DocuSigned by:
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Consent Decree Annual LDAR Compliance Status Report

Introduction:

The purpose of this document is to fulfil the Appendix A, Part N, ¶ 34-36 LDAR reporting requirements of the BP-Husky Refining LLC (BPH) Consent Decree. This report covers the time period of January 1, 2022, through December 31, 2022. Until termination of this Consent Decree, each subsequent report will be due on January 31st and will cover the prior 2 half years.

Report Outline

The format of this report follows a process where Paragraphs from the Consent Decree which include reporting requirements for BPH are quoted in a text box, followed by a statement of applicability and reporting as appropriate.

I. Compliance Status Reports

On the dates and for the time periods set forth in Paragraph 35 of this Appendix, the Defendants shall submit, in the manner set forth in Section IX (Reporting Requirements) of the Consent Decree, a Compliance Status Report regarding compliance with this LDAR Program. The Compliance Status Report shall include the following information with respect to the relevant reporting period:

II. LDAR Personnel – Appendix A, Part N: Reporting ¶ 34.a.

The number of personnel assigned to LDAR functions at the Toledo Refinery and the percentage of time each person dedicated to performing his/her LDAR functions;

The Job Title of the individuals with LDAR responsibilities at the Toledo Refinery have been provided in the following table. The table includes individuals responsible for day-to-day LDAR compliance, including tagging, monitoring, administration, quality assurance, & quality control. The table does not include individuals that are responsible for purchasing, operating, or maintaining LDAR equipment.

Company	Number of Personnel	Job Title	Time Dedicated (%)
BP	1	LDAR Coordinator	80
Contractor	1	LDAR Site Supervisor	95
Contractor	1	LDAR ECS Database Administrator	95
Contractor	4	LDAR Technician	95
BP	6	Asset Coordinator	5
BP	5	Production Engineer	5
Contractor	1	LDAR Project Manager	90
BP	1	Environmental Manager	5

III. Non-compliance – Appendix A, Part N: Reporting ¶ 34.b.

An identification and description of any non-compliance with the requirements of this Appendix;

Date	Description of Non-Compliance	Cause	Corrective Action	Date Corrected
8/11/2021	Four (4) open-ended lines were visually identified by LDAR contractor in the Crude/Vac 1 (P011) process unit pumps (previously reported)	The OELs discovered are on drain lines to the sewer for pumps that are in heavy liquid service. OELs discovered and reported in a previous quarterly deviation report led BPH to initiate a site-wide OEL audit and to request that the LDAR contractor check all pumps in heavy liquid service for OELs.	These four OELs required maintenance and engineering. A work order was issued and an engineering package created. Maintenance and repairs were due to be completed by December 31, 2021; however, due to design issues, the engineering package was required to be redesigned, and then the pumps were unable to be isolated in the first quarter for maintenance repairs. During a recent Refinery turnaround, the Crude/Vac 1 unit went offline for a maintenance shutdown on 4/23/2022, and at that time the OEL's were no longer in VOC service. Repairs were made during the turnaround.	4/23/2022
1/25/2022	The PSV 02 pilot was monitored with an instrument reading above 500 ppmv above background as detected by Method 21 of 40 CFR part 60.	Operators in the Isocracker Unit identified a leak via an Audio, Visual, Olfactory (AVO) Inspection and contacted the LDAR contractor. Upon monitoring PSV 02, it was discovered to be leaking. Internal damage to the PSV is assumed to be the cause of the leak.	Operations replaced the PSV and it was monitored with an instrument reading less than 500 ppm above background as detected by Method 21 of 40 CFR part 60.	1/27/2022

Date	Description of Non-Compliance	Cause	Corrective Action	Date Corrected
9/14/2022	During an audit, a non-certified low-leaking valve was found installed on covered equipment.	The valve was added downstream of a valve on a bleeder to allow for a pressure gauge to be installed by operations.	Valve and pressure gauge was taken out of service and subsequently uninstalled.	9/20/2022

IV. Problems – Appendix A, Part N: Reporting ¶ 34.c.

An identification of any problems encountered in complying with the requirements of this Appendix;

There were no problems encountered in complying with the requirements of Appendix A – LDAR program.

V. Commercial Unavailability – Appendix A, Part N: Reporting ¶ 34.d.

The information required in Paragraphs 20 and 22 of this Appendix;

¶ 20. Commercial Unavailability of a Certified Low-Leaking Valve or Certified Low-Leaking Valve Packing Technology

During the reporting period, the following valves were not able to be replaced or repacked due to commercial unavailability:

Valve	Assessment Date	Vendors Contacted	Documentation
There were no times when valves were not replaced or repacked with a Certified Low-Leaking Valve or Certified Low-Leaking Valve Packing Technology during this reporting period.			

VII. Valve Replacement/Improvement Report – Appendix A, Part N: Reporting ¶ 34.d.

The information required in Paragraphs 20 and 22 of this Appendix;

¶ 22. Valve Replacement/Improvement Report.

In each Compliance Status Report due under Part N of this Appendix, the Defendants shall include a separate section in the Report that:

- (i) describes the actions it took to comply with this Part G; and
- (ii) identifies the schedule for any future replacements or upgrades. For the first Compliance Status Report due after the date twenty-four (24) months from the Effective Date, the Defendants shall certify that to the best of their knowledge, after due inquiry,

there remains in inventory at the Defendants' Toledo Refinery no replacement valves or valve packing for Covered Equipment, other than

- (i) those that meet the definition of "Certified Low-Leaking Valve" and/or "Certified Low- Leaking Valve Packing Technology," or
- (ii) valves for which a Commercial Unavailability determination is applicable, pursuant to Paragraph 20 hereof.

BPH worked with valve vendors to acquire "Certified Low-Leaking Valve" and/or "Certified Low- Leaking Valve Packing Technology" and implemented a process to procure only valves that meet these requirements since the effective date of the Consent Decree. Spare valve inventory audits were completed to identify and remove any non-compliant valves remaining in stock prior to March 25, 2022. A certification statement is included in this status report.

VIII.LDAR Training – Appendix A, Part N: Reporting ¶ 34.e

Identification of any LDAR training conducted in accordance with Part I of this Appendix;

By no later than six (6) months after the Effective Date, the Defendants shall have ensured that all personnel (whether employed by the Operator of the Toledo Refinery or contractors) responsible for LDAR monitoring, maintenance of LDAR monitoring equipment, LDAR repairs, and/or any other duties generated by the LDAR program have completed training on all aspects of LDAR that are relevant to the person's duties. By that same time, the Defendants shall develop a training protocol to ensure that refresher training is performed once per calendar year and that new personnel are sufficiently trained prior to any involvement in the LDAR program.

All personnel responsible with any aspect of the LDAR program were trained by September 25, 2020. An electronic training program has been developed and is delivered to new personnel and each calendar year as refresher training.

IX. QA/QC Daily Certification by Monitoring Technicians – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance ("QA")/Quality Control ("QC")

25. Daily Certification by Monitoring Technicians. Commencing no later than the Effective Date, on each Day that monitoring occurs, at the end of such monitoring Day to the extent

practical but in no case later than the next work day for the monitoring technician, the Defendants shall ensure that each monitoring technician certifies that the data collected represents the monitoring performed for that Day by requiring the monitoring technician to sign a form that includes the following certification:

On [insert date], I reviewed the monitoring data that I collected on [insert date] and, to the best of my knowledge and belief, the data accurately represents the monitoring I performed on that date.

In lieu of a form for each technician for each Day of monitoring, a log sheet may be created that includes the certification that the monitoring technicians would date and sign each Day that the technician collects data.

Monitoring technicians certify that the data collected represents the monitoring performed for the day by signing a log sheet at the end of the monitoring day or the next working day that contains the certification language:

“On the date noted below, I reviewed the monitoring data that I collected on the date noted below and, to the best of my knowledge and belief, the data accurately represents the monitoring I performed on that date. [Insert date]”

The following table lists deviations that was discovered regarding the LDAR technician certification:

Date	Deviation	Corrective Actions	Date Resolved
There were no deviations during this reporting period.			

X. QA/QC MOC Process – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance (“QA”)/Quality Control (“QC”)

26. Commencing by no later than the first full calendar quarter after the Effective Date, the Defendants shall undertake the following:

- a. Maintain their Management of Change (“MOC”) processes to continue to require the following:
 - i. For each MOC that involves the addition of a component or components subject to LDAR requirements, an action item will be generated for the LDAR coordinator to

- instruct an LDAR technician to tag each component affected by the MOC and enter it into the electronic LDAR database (registry); and
- ii. The action item required pursuant to (i) may not be closed with respect to a particular MOC until an LDAR technician has confirmed and reported to the LDAR Coordinator that the component or components have been tagged and entered into the LDAR database (registry).

Each MOC that involves the addition of a component or components subject to LDAR requirements, an action item is generated to tag each new component and enter it into the electronic LDAR database. The action item is not closed until after the components have been tagged and added to the LDAR database. The following table lists deviations that was discovered in the MOC processes:

Date	Deviation	Corrective Actions	Date Resolved
There were no deviations during this reporting period.			

XI. QA/QC Process Unit Walk-Throughs – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance (“QA”)/Quality Control (“QC”)

26. Commencing by no later than the first full calendar quarter after the Effective Date, the Defendants shall undertake the following:
- b. An LDAR-trained employee or contractor of the Defendants, who does not serve as an LDAR monitoring technician on a routine basis, shall conduct process unit walk-throughs, at unannounced times, to assure that all Covered Process Units are reviewed at least once per year, and in the course of those walk-throughs conduct spot checks of Equipment to verify that the Equipment checked is included in the LDAR database and is properly tagged.

An LDAR-trained employee or contractor of the Defendants, who does not serve as an LDAR monitoring technician on a routine basis, has conducted process unit walk-throughs, at unannounced times, to assure that all Covered Process Units are reviewed at least once per year, and in the course of those walk-throughs conducted spot checks of Equipment to verify that the Equipment checked is included in the LDAR database and is properly tagged.

The following table lists equipment that was discovered in the field walkthroughs and enhanced P&ID audit that were not properly tagged and not included in the LDAR database.

Date	Description of Non-Compliance	Cause	Corrective Action	Date Corrected
There were no deviations during this reporting period.				

XII. QA/QC LDAR Database Electronic Records Review – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance (“QA”)/Quality Control (“QC”)

26. Commencing by no later than the first full calendar quarter after the Effective Date, the Defendants shall undertake the following:

- c. On a quarterly basis, review the LDAR database’s electronic records to:
 - (i) verify that Covered Equipment was monitored at the appropriate frequency;
 - (ii) verify that proper documentation and sign-offs have been recorded for all Covered Equipment placed on the shutdown or DOR list;
 - (iii) verify that repairs have been performed within the required timeframe;
 - (iv) review monitoring data and Covered Equipment counts (e.g., number of pieces of Covered Equipment monitored per Day) for feasibility and unusual trends; and
 - (v) verify that proper calibration records and monitoring instrument maintenance information are stored and maintained.

The LDAR database electronic records have been reviewed quarterly to verify:

- (i) Covered Equipment was monitored at the appropriate frequency;
- (ii) proper documentation and sign offs have been recorded for all Covered Equipment placed on the shutdown or DOR list;
- (iii) repairs have been performed within the required timeframe;
- (iv) monitoring data and Covered Equipment counts (e.g., number of pieces of Covered Equipment monitored per Day) has been reviewed for feasibility and unusual trends; and
- (v) proper calibration records and monitoring instrument maintenance information are stored and maintained.

The following table lists deviations discovered during the database electronics record review:

Deviation	Corrective Action	Corrective Action Completion Date	Quarter Review Conducted
There were no deviations during this reporting period.			

XIII. QA/QC Spot Checks of LDAR Program Records – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance (“QA”)/Quality Control (“QC”)

26. Commencing by no later than the first full calendar quarter after the Effective Date, the Defendants shall undertake the following:

- d. On a quarterly basis, at unannounced times, conduct spot checks of LDAR program records to verify that those records are maintained as required;

Spot checks of the LDAR program records have been conducted on a quarterly basis, at unannounced times. The following deviations (if any) were identified during the spot checks.

Date	Deviation	Corrective Actions	Date Resolved
There were no deviations during this reporting period.			

XIV. QA/QC Observations of LDAR Monitoring Technicians – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance (“QA”)/Quality Control (“QC”)

26. Commencing by no later than the first full calendar quarter after the Effective Date, the Defendants shall undertake the following:

- e. On a quarterly basis, at unannounced times, observe each LDAR monitoring technician in the field to ensure monitoring is being conducted as required.

Observations of each LDAR monitoring technician in the field was conducted on a quarterly basis, at unannounced times, to ensure monitoring is being conducted as required. The following deviations were identified during the observations:

Date	Deviation	Corrective Actions	Date Resolved
There were no deviations during this reporting period.			

XV. QA/QC LDAR Program Review Log – Appendix A, Part N: Reporting ¶ 34.f.

Any deviations identified in the QA/QC performed under Part J of this Appendix A, as well as any corrective actions taken under Part K;

Part J: Quality Assurance (“QA”)/Quality Control (“QC”)

The Defendants shall correct any deficiencies detected or observed as soon as practicable. The Defendants shall maintain a log that:

- (i) records the date and time that the reviews, verifications, and observations required by this Paragraph were undertaken; and
- (ii) describes the nature and timing of any corrective actions taken.
- (iii)

A log is being maintained that:

- (i) Records the date and time that the reviews, verifications, and observations required by this Paragraph were undertaken; and

- (ii) Describes the nature and timing of any corrective actions taken.

**XVI. LDAR Audit Results and CAP Status – Appendix A, Part N: Reporting
¶ 34.g.&h.**

A summary of LDAR audit results for audits that were completed during reporting period, including specifically identifying all deficiencies; and

The status of all actions under any CAP that was submitted pursuant to Part K of this Appendix during the reporting period.

No LDAR audits were completed during the reporting period.